

harder than to form any one self-consistent *schema* of the line within which distribution falls. The common complaint that the fundamental categories of rent, interest, wages, and profits, have in popular usage a meaning not that assigned to them by the economists, only expresses a small part of the difficulty. There is hardly an economical treatment of the subject which altogether evades the consequences of the peculiar difficulty that these terms are indifferently employed to mark the remuneration which, in a hypothetical or actual state of society, falls to distinct industrial functions, and the shares which, in like circumstances, are enjoyed by distinct industrial classes. Hardly anywhere is there sufficient recognition of the important distinction between the proximate and the ultimate conditions through which the distribution of produced wealth comes about. Illustration of these difficulties can be given only from Prof. Walker's excellent and most instructive treatment of profits. Here, following, or at all events coinciding with, some of the best Continental economists, Prof. Walker develops the notion of the *entrepreneur* and his industrial function, and assimilates the remuneration of the *entrepreneur* to rent, from which follow certain important general propositions. Profit, apparently, is regarded as the title of the share falling to the *entrepreneur*. Now, undoubtedly there is a portion of the share falling at any given time to the *entrepreneur* which in its origin and laws is identical with rent, for rent is a quite general consequence of any inequality, howsoever arising, in productive sources at any moment needed for the satisfaction of social wants. But it is impossible to identify this with profit at large, —an identification which Prof. Walker appears to reject in § 255, but which he accepts without qualification in the proposition that there is a class of no-profit *entrepreneurs*. There is doubtless a class of no-profit *entrepreneurs*, but the immediate inference is that the term profit is not equivalent to remuneration of the *entrepreneur*, while it is a further consequence that, in quarters where it has not generally been looked for, there is precisely the same rent-element, in wages *e.g.*, and in payment for the use of capital. What conceals it from us in many cases, and makes it disappear in particular conditions, is the greater perfection of the market for services, which tends to remove the inequalities out of which rent essentially emerges. Prof. Walker's analysis of the *entrepreneur* remuneration seems thus to be far from adequate, though it is on the right track. He has not sufficiently recognised that, if we take *entrepreneurs* as a class, then, by whatsoever name we describe it, their remuneration will be a complex quantity, proximately determined by the conditions under which the exercise of the *entrepreneur* function at any moment meets a social want, ultimately breaking up into a number of distinct remunerations, each having its own natural origin and laws. So with wages. To begin the analysis of wages with the conception of the hired labourer, though it keeps one closer to practice, is only to make a first step, and ought not to conceal from us the essentially complex character of the payment so-called. I believe that fundamentally I am in agreement with Prof. Walker in his view of the ultimate condition determining wages, but I cannot assign such importance to it as he seems to do, and I wish that he had observed his own prudent

caution (§ 9) regarding the word property, and not thought it necessary to say (§ 273) that, after deduction of rent, profits, interest, "the whole remaining body of wealth daily or annually created is the property of the labouring class"! This is either one of the many truisms that abound in theoretical economics, or it is a dubious, ambiguous, and incautious rule for practice. It is to be added, however, that Prof. Walker's practical observations about wages in §§ 278–239 are excellent and to the point.

R. ADAMSON

ALGÆ

Till Algernes Systematik. Nya bidrag af J. G. Agardh (Fferdeafdelningen). VII. "Florideæ." *Lunds Univ. Årsskrift*, tom. xxi. 4to. (*Proceedings of the University of Lund, Sweden, 1886.*)

FOR more than forty-five years the venerable author —now a septuagenarian—of the work mentioned at the head of this notice, has continued to produce, at brief intervals, a succession of standard works on Algæ. We hope this will not be the last. The present work is a fourth instalment of Dr. Agardh's "Contributions to the Systematic Classification of Algæ." The three preceding parts have been already reviewed in NATURE.¹

The recent part, which consists of 117 pages, is devoted to the Florideæ. Besides observations elucidating many genera and species already partially known, it contains descriptions of three new genera and between fifty and sixty species. Of the new genera, Titanophora, which belongs to the Nemastomeæ, contains two species—*T. incrustans*, J. Ag. (*Halymenia incrustans*, J. Ag.), and *T. Pikeana* (*Galaxaura Pikeana*, Dickie)—both from Mauritius. The other new genera belong to the Rhodymeniaceæ, namely, Glaphyrymenia, of which there is one species—*G. pustulosa* (see Fig. 4)—and Merrifieldia, which also contains one species—*M. ramentacea*. The last-mentioned alga is one among several instances where the algologist has had to wait many years before he had amassed sufficient material to enable him to give an accurate description of the plant, and to decide on its place in the system. Every one who has collected algæ must know how frequently it happens that plants are dredged or cast ashore in an imperfect state. In some the lower part may be absent; in others the apices of the ultimate branchlets may be broken off; in others, again, the plants may be sterile; or, in the case of the Florideæ, they may bear but one species of fruit. Until, therefore, perfect plants, bearing ripe cystocarps, and others bearing sphaerospores, have been thoroughly examined, neither the genus nor the species of the plant can be accurately determined. *M. ramentacea* was first partially described by C. Agardh, in the "Systema," upwards of sixty years ago, under the name of *Chondria ramentacea*, and afterwards by his son, Dr. Agardh, in the "Epicrisis" (p. 661), as *Hypnea ramentacea*. The examination of subsequent examples, with fruit of both kinds, has induced Dr. Agardh to consider this alga as the typical species of a new genus.

¹ The first part, containing a revision of (1) Caulerpa, (2) Zonaria, and (3) certain groups of Sargassum, was published in 1872, in vol. ix. of the *Proceedings of the University of Lund*; the second part, containing (4) Chordarieæ, and (5) Dictyotæ in vol. xvii.; and the third part, containing (6) Ulvaceæ in vol. xix. of the *Proceedings of the same University*.

In Fig. 5 the cystocarps and sphaerospores, in different degrees of development, are represented.

Two other genera at present but little known, namely, *Marchesettia* (Hauck) and *Melanoseris* (Zan.), are also commented on. The former is a most singular alga, in appearance much more like a branched sponge than a plant, and, except for the little deep-red fruit-leaflets, it might readily be taken for one. The discovery of the fruit shows that its affinities are with *Thamnoclonium*. One of the several new species of this genus, described in the present work, so much resembles *Marchesettia*, that it has been named *T. Marchesettoides*.

The other genus, *Melanoseris*, is nearly related to *Pollexfenia*, from which it is distinguished by the fruit in the former being marginal, instead of on the disk, as in the latter, and by its smaller size.

Halymenia saccata (Harv. and H. "Fl. Tasm.") has long been a puzzle to algologists. Dr. Agardh now refers it to *Bindera*, supporting his opinion by a comparison of the structure and fruit with those of *Bindera splachnoides* (see pp. 41-46, and Fig. 3).

Another plant, *Amansia? Marchantioides*, first mentioned in the "Flora of New Zealand," had not, hitherto, been accurately determined. Dr. Agardh now considers it to be a *Placophora*.

Among the more interesting of the new species is *Cliftonæa imbricata*, of which one specimen only has yet been discovered. This was also the case with *C. semipennata*, of which one example only is known to exist.

The present work is illustrated by one plate. The eight figures are printed in a red ink, which is somewhat dazzling to the eyes.

In conclusion, we venture to suggest that *Gracilaria Millardetii* (p. 64) should be *G. Maillardetii*, the plant having been named by Montagne *Rhodymenia Maillardetii*, in honour of M. Maillard, the author of "Notes sur l'Île de Réunion."

OUR BOOK SHELF

Practical Chemistry, with Notes and Questions on Theoretical Chemistry. By William Ripper, Assistant Professor of Mechanical Engineering, Sheffield Technical School. Second Edition. (London: Isbister and Co., 1885.)

TRULY the number of little books coming into existence, presumably to aid students to do the Science and Art Department's examinations, is very great, and they are not by any means always good. The evil of a big book has evidently been well seen by chemical teachers, and more especially by teachers connected with the Department's examinations, many little books springing up intended originally for the class or school to which the teacher is attached only. In some, the greater number of cases perhaps, this is a very happy thing for students in general. When a book of this kind passes through two editions in a reasonably short time there is some cause for its survival. The book before us has evidently fulfilled its mission in a fairly satisfactory manner. It is still decidedly one of the cramming class, but it contains an amount of matter simply and well arranged which, with the aid of a teacher, or demonstrations, should enable any ordinarily industrious student to "pass" the first stage of the "Department's" examinations.

The first part contains descriptions of experiments on the non-metallic elements, reactions for metals and acids, and tables for the examination of a simple salt. The

second part, called "Theoretical Chemistry," is mostly equations, and questions and problems.

Free Public Libraries; their Organisation, Uses, and Management. By Thomas Greenwood, F.R.G.S. (London: Simpkin, Marshall, and Co., 1886.)

IF in Her Majesty's dominions there is a spot where newspapers do not penetrate and where free libraries are only known by name, and yet where some pioneering spirit only requires a spark to set aflame the desire to start such an institution, this book will be a fitting flint and steel for the purpose. But as such a combination is to be found in very few places, we cannot encourage the writer to hope that many will read his 500 pages of newspaper cuttings with much satisfaction. To any reader who is within measurable distance of earnestly considering that "most interesting question of the day—how to work a free library in a small community"—nineteenths of this book, commencing its survey as it does at the British Museum, will be provokingly irrelevant; he will grudge the time taken up in finding where the practical information is scattered. As a missionary book, crying in the wilderness the advent of knowledge, it is less likely to make its way than the newspapers from which it is compiled, and it is thoroughly wanting in the eloquent earnestness of the prophet.

Still there is much excellent advice to those who know nothing about the matter; and since it seems to have been written, as the compiler says, "with the earnest hope of increasing the number of free libraries" (there are 133 now open in Great Britain) we gladly call to it the attention of any to whom such a book as we describe may be useful. The combination in the writer of librarian and newspaper editor has made easy to him much that would have been a considerable labour to others who might have gone more deeply into the subject, and his information is brought down to marvellously recent date.

The hasty way in which it has been put together is illustrated by an account on p. 83 of "first failures," which apparently apply to Sheffield, and are not discovered to belong to Newcastle-upon-Tyne till three pages further on there comes a full-page engraving of the important building opened there in 1884 by the Prince of Wales. A puzzled reader may guess that a short paragraph on p. 100 should have introduced its history, but that it found its present place among the author's notes through confusion of the name with that of Newcastle-under-Lyme. The same haste appears in more important matters. Mr. Greenwood very properly urges the importance of the librarian as the "vocal key to the catalogues," and gives a touching illustration of the value of knowledge and sympathy in that officer. "Wives and children come for books, and make the request, 'Please pick me a nice one, sir, for if I take home an interesting book, my husband (or father, as the case may be) will stop in during the evening and read it to us.'" We must point out the inconsistency between this and the unqualified advice he gives to the librarian not to stand "at the desk entering out and taking in the books, and so uselessly employed in doing the work of a boy." It will be found that as such a librarian stands at the counter and hears the wants expressed of the class for whose benefit chiefly these libraries are considered to be established, the circulation of books will increase; while if it is left to a boy to do the work, the popularity, the circulation, and to a far greater extent the good work, of a free library will fall off. The same consideration also should qualify the zeal with which the use of indicators is urged, which, though theoretically very simple, and to the library officials very time-saving things, yet practically do not work where any attempt is made to accommodate the class just referred to, or an unlearned public who, it will be found, won't use catalogues. For one minute, however, which they save the librarian, they hinder five